

## EAST Search History

## EAST Search History (Prior Art)

| Ref # | Hits | Search Query  | DBs  | Default Operator | Plurals | Time Stamp          |
|-------|------|---|--|------------------|---------|---------------------|
| L1    | 11   | (I with Q with (subcarrier\$4 or sub\$2carrier\$4 or subchannel\$4 or sub\$2channel\$4)) same (IFFT) and @ad<="20030318"                                      | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:07 |
| L2    | 5    | (I with Q with (subcarrier\$4 or sub\$2carrier\$4 or subchannel\$4 or sub\$2channel\$4)) and (IFFT) same pilot and @ad<="20030318"                            | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:09 |
| L5    | 3    | (complex with (convol\$7) with pilot\$4) and @ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:13 |
| L6    | 3    | (convol\$5 same IFFT same pilot) and modulat\$5 with (subcarrier\$4 or subchannel\$4 or sub\$2carrier\$4 or sub\$2channel\$4) and @ad<="20030318"             | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:23 |
| L7    | 3    | (FDRM) and @ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:26 |
| L8    | 4    | (pilot with data with (convolut\$5 with encod\$5)) same IFFT and @ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:28 |
| L10   | 34   | (convolution adj encod\$5) and IFFT and @ad<="20030318"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:38 |
| L11   | 19   | (data or payload) with (pilot) with (phase) with ((add\$4 or combin\$4 or sum\$4) or (multiplication or multiplied or multiply)) and IFFT and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2010/06/18<br>10:41 |

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| L12 | 1   | ("6639950").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/18<br>11:01 |
| L13 | 135 | (add\$4 or combin\$4 or<br>convol\$5 or sum\$4) with<br>(data or payload) with pilot<br>\$4 same IFFT  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:09 |
| L14 | 31  | (add\$4 or combin\$4 or<br>convol\$5 or sum\$4) with<br>(data or payload) with pilot<br>\$4 same IFFT and<br>@ad<="20030318"                 | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:10 |
| L15 | 2   | phase with pilot with data<br>with (add\$4 or sum\$4 or<br>multiplication or multiply)<br>same IFFT and<br>@ad<="20030318"                   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:20 |
| L16 | 0   | (phase adj (add\$4 or combin<br>\$4 or sum\$4)) with pilot<br>with data same IFFT and<br>@ad<="20030318"                                     | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:22 |
| L17 | 0   | (phase adj1 (add\$4 or<br>combin\$4 or sum\$4 or<br>multiplication or multiply))<br>with pilot with data same<br>IFFT and<br>@ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:22 |
| L18 | 1   | (PAPR or crest) and (phase<br>with data with pilot) same<br>IFFT and<br>@ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:25 |
| L19 | 0   | (PAPR or crest).ti. and<br>(phase with data with pilot)<br>same IFFT and<br>@ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:27 |
| L20 | 0   | (PAPR or crest).ti. and<br>(phase with data with pilot)<br>and IFFT and<br>@ad<="20030318"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:27 |
| L21 | 3   | (PAPR or crest).ti. and<br>((phase with (rotat\$4 or shift<br>\$4 or modif\$5)) same data<br>same pilot) and IFFT and<br>@ad<="20030318"     | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:28 |

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| L22 | 3692 | ofdm and (phase with (shift \$4 or rotat\$5)) and IFFT   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:37 |
| L23 | 383  | ofdm and (phase with (shift \$4 or rotat\$5)) with pilot and IFFT  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:37 |
| L24 | 131  | ofdm and (phase with (shift \$4 or rotat\$5)) with pilot with (payload or data) and IFFT   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:37 |
| L25 | 23   | ofdm and (phase with (shift \$4 or rotat\$5)) with pilot with (payload or data) and IFFT and @ad<="20030318"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:37 |
| L26 | 46   | FFT adj modulation   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/18<br>11:48 |
| S1  | 76   | ((BRIAN) near2 (STEWART)). INV.  | US-PGPUB;<br>USPAT   | OR | ON  | 2009/03/31<br>09:33 |
| S2  | 1    | ("2006/0269011").URPN.   | USPAT  | OR | ON  | 2009/03/31<br>09:37 |
| S3  | 3    | ((("6026123") or ("0752779")).PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2009/10/27<br>11:35 |
| S4  | 5    | motorola and parmelee and jasper   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/27<br>11:52 |
| S5  | 826  | ofdm and (data or symbol) with (pilot or train\$4 or preamble or control) with (convolut\$3 or (phase near (shift\$3 or rotat\$4 or chang \$4)))   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/27<br>11:54 |
| S6  | 86   | ofdm and (data or symbol) with (pilot or train\$4 or preamble or control) with (convolut\$3 or (phase near (shift\$3 or rotat\$4 or chang \$4))) same (modulat\$5 with (subcarrier or sub-carrier\$3 or sub\$2carrier\$3 or tone \$2)) | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/27<br>11:54 |

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| S7  | 21  | ofdm and (data or symbol) with (pilot or train\$4 or preamble or control) with (convolut\$3 or (phase near (shift\$3 or rotat\$4 or chang\$4))) same (modulat\$5 with (subcarrier or sub-carrier\$3 or sub\$2carrier\$3 or tone\$2)) and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/27<br>12:01 |
| S8  | 188 | ofdm and (data or symbol) with (pilot or train\$4 or preamble or control) with (convolut\$3 or (phase near (shift\$3 or rotat\$4 or chang\$4))) and @ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/27<br>13:21 |
| S9  | 14  | ofdm and (data or symbol) with (pilot or train\$4 or preamble or control) with (convolut\$3) and @ad<="20030318"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/27<br>13:53 |
| S10 | 70  | ofdm and (data with (control or pilot)) with (add\$3 or combin\$3 or sum\$4) same (subcarrier or sub\$1carrier) same modulat\$4  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/27<br>15:06 |
| S11 | 8   | ofdm and (data with (control or pilot)) with (add\$3 or combin\$3 or sum\$4) same (subcarrier or sub\$1carrier) same modulat\$4 and @ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/27<br>15:16 |
| S12 | 1   | ("2006/0269011").URPN.   | USPAT  | OR | ON | 2009/10/27<br>15:33 |
| S13 | 6   | ("20010022777"   "20040264595"   "20060269011"   "5302914"   "5636247"   "7023930").PN. OR ("7391713").URPN.   | US-PGPUB;<br>USPAT; USOCR                                      | OR | ON | 2009/10/27<br>15:33 |
| S14 | 17  | convolut\$4 with data with (control or training or pilot) same (subcarrier\$3 or sub-carrier\$2 or tone\$2)  | US-PGPUB;<br>USPAT; USOCR                                      | OR | ON | 2009/10/27<br>15:35 |
| S15 | 7   | convolut\$4 with data with (control or training or pilot) same (subcarrier\$3 or sub-carrier\$2 or tone\$2) and @ad<="20031007"  | US-PGPUB;<br>USPAT; USOCR                                      | OR | ON | 2009/10/27<br>15:35 |
| S16 | 81  | ((BRIAN) near2 (STEWART)).INV.   | US-PGPUB;<br>USPAT   | OR | ON | 2009/10/28<br>09:14 |
| S17 | 1   | ((BRIAN) near2 (STEWART)).INV. and ofdm  | US-PGPUB;<br>USPAT   | OR | ON | 2009/10/28<br>09:15 |

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| S18 | 2347 | "375/240.24".OCLS.  | US-PGPUB;<br>USPAT  | OR | ON | 2009/10/28<br>09:16 |
| S19 | 14   | S18 and ofdm  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON | 2009/10/28<br>09:16 |
| S20 | 4744 | pilot same (data or symbol)<br>same (convolution or<br>convoluting or multipl\$4 or<br>add\$4 or sum\$4 or difference<br>\$3 or subtract\$4 or combin<br>\$4) and ofdm  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/28<br>09:33 |
| S21 | 1891 | pilot same (data or symbol)<br>same (convolution or<br>convoluting or multipl\$4 or<br>add\$4 or sum\$4 or difference<br>\$3 or subtract\$4 or combin<br>\$4) same (subcarrie\$4 or sub<br>\$1carrier\$4 or tone\$2) and<br>ofdm  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/28<br>09:33 |
| S22 | 272  | pilot same (data or symbol)<br>same (convolution or<br>convoluting or multipl\$4 or<br>add\$4 or sum\$4 or difference<br>\$3 or subtract\$4 or combin<br>\$4) same (subcarrie\$4 or sub<br>\$1carrier\$4 or tone\$2) same<br>(phase near (shift\$4 or add<br>\$4 or difference or subtract<br>\$4 or rotat\$4)) and ofdm                        | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/28<br>09:34 |
| S23 | 74   | pilot same (data or symbol)<br>same (convolution or<br>convoluting or multipl\$4 or<br>add\$4 or sum\$4 or difference<br>\$3 or subtract\$4 or combin<br>\$4) same (subcarrie\$4 or sub<br>\$1carrier\$4 or tone\$2) same<br>(phase near (shift\$4 or add<br>\$4 or difference or subtract<br>\$4 or rotat\$4)) and ofdm<br>and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/28<br>09:35 |
| S24 | 35   | pilot with (data or symbol)<br>with (convolution or<br>convoluting or multipl\$4 or<br>add\$4 or sum\$4 or difference<br>\$3 or subtract\$4 or combin<br>\$4) same (subcarrie\$4 or sub<br>\$1carrier\$4 or tone\$2) same<br>(phase near (shift\$4 or add<br>\$4 or difference or subtract<br>\$4 or rotat\$4)) and ofdm<br>and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2009/10/28<br>10:54 |

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| S25 | 379  | pilot with symbol with<br>(multipl\$4 or add\$4 or<br>subtract\$4 or rotat\$4 or shift<br>\$4)and ofdm and<br>@ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>11:01 |
| S26 | 97   | pilot with symbol with<br>(multipl\$4 or add\$4 or<br>subtract\$4 or rotat\$4 or shift<br>\$4) same (subcarrier\$2 or<br>sub-carrier\$2 or sub\$2carrier<br>\$3) and ofdm and<br>@ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>11:02 |
| S33 | 1    | ("20040268190").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                                  | OR | OFF | 2009/10/28<br>13:25 |
| S34 | 1085 | ofdm and (data or symbol)<br>with (pilot) same<br>(( convolution or multipl\$4<br>or rotat\$4 or shift\$4) with<br>phase)  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2009/10/28<br>14:33 |
| S35 | 357  | ofdm and (data or symbol)<br>with (pilot) same<br>(( convolution or multipl\$4<br>or rotat\$4 or shift\$4) with<br>phase) same (subcarrier\$3<br>or sub\$2carrier\$3)                            | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2009/10/28<br>14:33 |
| S36 | 69   | ofdm and (data or symbol)<br>with (pilot) same<br>(( convolution or multipl\$4<br>or rotat\$4 or shift\$4) with<br>phase) same (subcarrier\$3<br>or sub\$2carrier\$3) and<br>@ad<="20030318"     | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2009/10/28<br>14:34 |
| S37 | 1    | ("7447268").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                                  | OR | OFF | 2009/10/28<br>15:05 |
| S38 | 626  | (combin\$4 or add\$4 or sum<br>\$4) with (pilot) with (data or<br>symbol) with phase   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2009/10/28<br>15:17 |
| S39 | 57   | (combin\$4 or add\$4 or sum<br>\$4) with (pilot) with (data or<br>symbol) with phase and<br>ofdm and<br>@ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2009/10/28<br>15:18 |

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| S40 | 13   | ("20010005401"  <br>"20010033623"  <br>"20020065047"  <br>"20020145971"  <br>"20020159533"  <br>"20030058968"   "4716574"<br>  "5274629"   "5627863"  <br>"5732113"   "5912876"  <br>"6097714"   "6522700").PN.<br>OR ("7339882").URPN. | US-PGPUB;<br>USPAT; USOCR                                      | OR | ON  | 2009/10/28<br>15:26 |
| S41 | 486  | 375/269   | US-PGPUB;<br>USPAT; USOCR                                      | OR | ON  | 2009/10/28<br>16:17 |
| S43 | 1076 | (375/269,265).CCLS.   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2009/10/28<br>16:17 |
| S44 | 19   | S43 and (ofdm) and pilot<br>same phase  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>16:17 |
| S45 | 66   | (phase near (add\$4 or<br>subtract\$4)) same (data<br>with pilot)   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>16:56 |
| S46 | 38   | (phase near (add\$4 or<br>subtract\$4)) same (data<br>with pilot) and<br>@ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>16:57 |
| S47 | 22   | (phase near (add\$4 or<br>subtract\$4)) with (data with<br>pilot) and<br>@ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>17:04 |
| S48 | 6    | (phase near (add\$4 or<br>subtract\$4)) with (data with<br>pilot) and ofdm and<br>@ad<="20030318"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>17:04 |
| S49 | 626  | (combin\$4 or add\$4 or sum<br>\$4) with (phase\$4) with pilot<br>with (data or symbol)   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>17:14 |
| S50 | 42   | (combin\$4 or add\$4 or sum<br>\$4) with (phase\$4) with pilot<br>with (data or symbol) with<br>ofdm  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2009/10/28<br>17:15 |

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| S51 | 14  | (combin\$4 or add\$4 or sum \$4) with (phase\$4) with pilot with (data or symbol) with ofdm and @ad<="20030318"  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON  | 2009/10/28 17:15 |
| S52 | 58  | (combin\$4 or add\$4 or sum \$4) with (pilot) with (data or symbol) with ofdm and @ad<="20030318"  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON  | 2009/10/28 17:20 |
| S53 | 370 | (add\$4 or combin\$4) with (data) with pilot with phase  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON  | 2009/10/29 09:08 |
| S54 | 4   | (add\$4 or combin\$4) with (data) with pilot with phase same ofdm and @ad<="20030318"  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON  | 2009/10/29 09:20 |
| S55 | 1   | ("6026123").PN.  | US-PGPUB; USPAT; USOCR; EPO; JPO                   | OR | OFF | 2009/10/29 09:21 |
| S57 | 5   | ("20050034009"   "6956847"   "7068679"   "7164860"   "7227876").PN. OR ("7542479").URPN.   | US-PGPUB; USPAT; USOCR                             | OR | ON  | 2009/10/29 09:32 |
| S58 | 7   | ofdm and (pilot) with data with (embed\$4 or insert\$4) with random  | US-PGPUB; USPAT; USOCR                             | OR | ON  | 2009/10/29 10:40 |
| S59 | 136 | ofdm and (pilot) with data with (embed\$4 or insert\$4) and @ad<="20030518"  | US-PGPUB; USPAT; USOCR                             | OR | ON  | 2009/10/29 10:41 |
| S60 | 10  | ("20010018483"   "20010053143"   "20030021332"   "20070053282"   "20070253324"   "6496144"   "6801586"   "6850481"   "6985434"   "7039004").PN. OR ("7463577").URPN. | US-PGPUB; USPAT; USOCR                             | OR | ON  | 2009/10/29 10:51 |
| S61 | 5   | ofdm and (pilot with control) with data with (embed\$4 or insert\$4) and @ad<="20030518"   | US-PGPUB; USPAT; USOCR                             | OR | ON  | 2009/10/29 10:54 |
| S62 | 2   | "US 20060269011"   | US-PGPUB; USPAT; USOCR; DERWENT                    | OR | ON  | 2009/10/29 11:19 |



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|-----|-----|---|--|----|----|---------------------|
| S63 | 111 | ofdm and (pilot or preamble) same ("I" or (real) or in-phase) same ("Q" or quadrature or imaginary) same IFFT                     | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>13:55 |
| S64 | 18  | ofdm and (pilot or preamble) same ("I" or (real) or in-phase) same ("Q" or quadrature or imaginary) same IFFT and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>13:55 |
| S65 | 100 | (pilot) same ("I" or (real) or in-phase) same ("Q" or quadrature or imaginary) same IFFT  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>13:59 |
| S66 | 16  | (pilot) same ("I" or (real) or in-phase) same ("Q" or quadrature or imaginary) same IFFT and @ad<="20030318"                      | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>13:59 |
| S67 | 56  | ofdm and IFFT same "I" with "Q" same pilot  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>14:00 |
| S68 | 56  | ofdm and IFFT same pilot same ("I" with "Q")  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>14:02 |
| S69 | 6   | ofdm and IFFT same pilot same ("I" with "Q") and @ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>14:03 |
| S70 | 9   | ofdm and IFFT same (preamble or pilot) same (("I" or real) with (quadrature or "Q")) and @ad<="20030318"                          | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>14:09 |
| S71 | 10  | IFFT same (preamble or pilot) same (("I" or real) with (quadrature or "Q")) and @ad<="20030318"                                   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>14:13 |
| S72 | 85  | IFFT same (preamble or pilot) and (("I" or real) with (quadrature or "Q")) and @ad<="20030318"                                    | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>14:14 |

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| S73 | 313 | IFFT and (preamble or pilot) and (("I" or real) with (quadrature or "Q")) and @ad<="20030318"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>14:29 |
| S74 | 264 | ofdm and IFFT and (preamble or pilot) and (("I" or real) with (quadrature or "Q")) and @ad<="20030318"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>14:29 |
| S75 | 1   | ("7738572").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/17<br>15:15 |
| S76 | 11  | ("20030053563"  <br>"20030072393"  <br>"20040092241"  <br>"20050008101"  <br>"20060078058"   "5263196"<br>  "5414728"   "5953311"  <br>"6462626"   "6535560"  <br>"6977977").PN. OR<br>("7738572").URPN. | US-PGPUB;<br>USPAT; USOCR                                      | OR | ON  | 2010/06/17<br>15:18 |
| S77 | 1   | ("20060034378").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/17<br>15:26 |
| S78 | 1   | ("20090323510").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/17<br>15:30 |
| S79 | 1   | ("(20050084042)").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/17<br>15:31 |
| S80 | 122 | "I" with "Q" with IFFT same modulat\$5   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>15:34 |
| S81 | 40  | "I" with "Q" with IFFT same modulat\$5 and @ad<="20030818"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>15:35 |
| S82 | 1   | ("5732113").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/17<br>15:35 |
| S83 | 1   | ((("7606138") or (""))).PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/17<br>15:42 |
| S84 | 3   | ofdm and (sub-carrier\$4 or subcarrier\$4 or ton\$4) with ("I" or real) with ("Q" with imaginary) same IFFT  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>15:46 |

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| S85 | 20   | ofdm and (sub-carrier\$4 or subcarrier\$4 or ton\$4) same ("I" or real) same ("Q" with imaginary) same IFFT  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>15:47 |
| S86 | 97   | (multipl\$4 or plur\$4) with (sub-carrier\$4 or subcarrier\$4 or ton\$4) and ("I" or real) same ("Q" with imaginary) and IFFT  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>15:49 |
| S87 | 26   | (multipl\$4 or plur\$4) with (sub-carrier\$4 or subcarrier\$4 or ton\$4) and ("I" or real) same ("Q" with imaginary) and IFFT and @ad<="20030318"                                  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>15:50 |
| S88 | 567  | ((multipl\$4 or plur\$4) with (IFFT or inverse adj fourier adj transform adj matrix)) same (subcarrier\$4 or sub-carrier\$4 or ton\$4) and OFDM and modulat\$5                     | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>15:59 |
| S89 | 99   | ((multipl\$4 or plur\$4) with (IFFT or inverse adj fourier adj transform adj matrix)) same (subcarrier\$4 or sub-carrier\$4 or ton\$4) and OFDM and modulat\$5 and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>15:59 |
| S90 | 2    | "US 20060269011"   | US-PGPUB;<br>USPAT; USOCR;<br>DERWENT                          | OR | ON | 2010/06/17<br>16:35 |
| S91 | 1388 | ofdm and (phase with (rotat\$5 or shift\$4)) same (modulat\$5) and @ad<="20030318"   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>16:48 |
| S92 | 149  | ofdm and (phase with (rotat\$5 or shift\$4)) same (IFFT or inverse adj fast adj fourier adj transform) same (modulat\$5) and @ad<="20030318"                                       | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>16:48 |
| S93 | 71   | ofdm and (phase with (rotat\$5 or shift\$4)) same (IFFT or inverse adj fast adj fourier adj transform) same (modulat\$5) and pilot\$4 and @ad<="20030318"                          | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>16:53 |

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| S94  | 3    | ofdm and IFFT with ((sub-channel or sub-carrier\$4) adj map\$4) and @ad<="20030318"                                | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>17:00 |
| S95  | 4    | ofdm and IFFT same ((sub-channel or sub-carrier\$4) adj map\$4) and @ad<="20030318"                                | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>17:00 |
| S96  | 6    | ofdm and IFFT same ((sub-channel or subchannel or subcarrier\$4 or sub-carrier\$4) adj map\$4) and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>17:00 |
| S97  | 7    | ("6389138"   "6535066"   "6618367").PN. OR ("7028246").URPN.   | US-PGPUB;<br>USPAT; USOCR                                      | OR | ON  | 2010/06/17<br>17:01 |
| S98  | 16   | IFFT same ((sub-channel or subchannel or subcarrier\$4 or sub-carrier\$4) adj2 map\$4) and @ad<="20030318"         | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>17:02 |
| S99  | 16   | IFFT same ((sub-channel or subchannel or subcarrier\$4 or sub-carrier\$4) adj2 map\$4) and @ad<="20030318"         | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>17:02 |
| S100 | 68   | ofdm and ((sub-channel or subchannel or subcarrier\$4 or sub-carrier\$4) adj2 map\$4) and @ad<="20030318"          | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>17:06 |
| S101 | 40   | ((sub-channel or subchannel or subcarrier\$4 or sub-carrier\$4) adj2 map\$4) and IFFT and @ad<="20030318"          | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>17:31 |
| S102 | 1    | ("6026123").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO                         | OR | OFF | 2010/06/17<br>18:01 |
| S103 | 3878 | (ifft)and ((phase with (rotat\$4 or shift\$4)) or random\$5) same modulat\$5                                       | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>18:03 |
| S104 | 834  | (ifft) same ((phase with (rotat\$4 or shift\$4)) or random\$5) same modulat\$5                                     | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2010/06/17<br>18:03 |

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| S105 | 22  | (ifft) same ((phase with (rotat\$4 or shift\$4)) or random\$5) same modulat\$5 same convolution                  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>18:03 |
| S106 | 142 | IFFT same modulat\$5 same (rotat\$4 or shift\$4) same (sub adj1 carrier or sub adj1 channel)                     | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>18:08 |
| S107 | 28  | IFFT same modulat\$5 same (rotat\$4 or shift\$4) same (sub adj1 carrier or sub adj1 channel) and @ad<="20030318" | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2010/06/17<br>18:09 |

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